



One Connected Future through GSO and NGSO

Africa's Broadband Connectivity Landscape

Rapid mobile
broadband growth

Affordability as barrier
to connectivity

Infrastructure
deployment

Satellite connectivity as
a complementary to
terrestrial networks

~75.2% of Africa's
population covered by
4G/LTE in 2025

~20.9% vs 54.7%
Internet usage in rural
vs urban Africa
(continuing rural digital
divide) in 2025

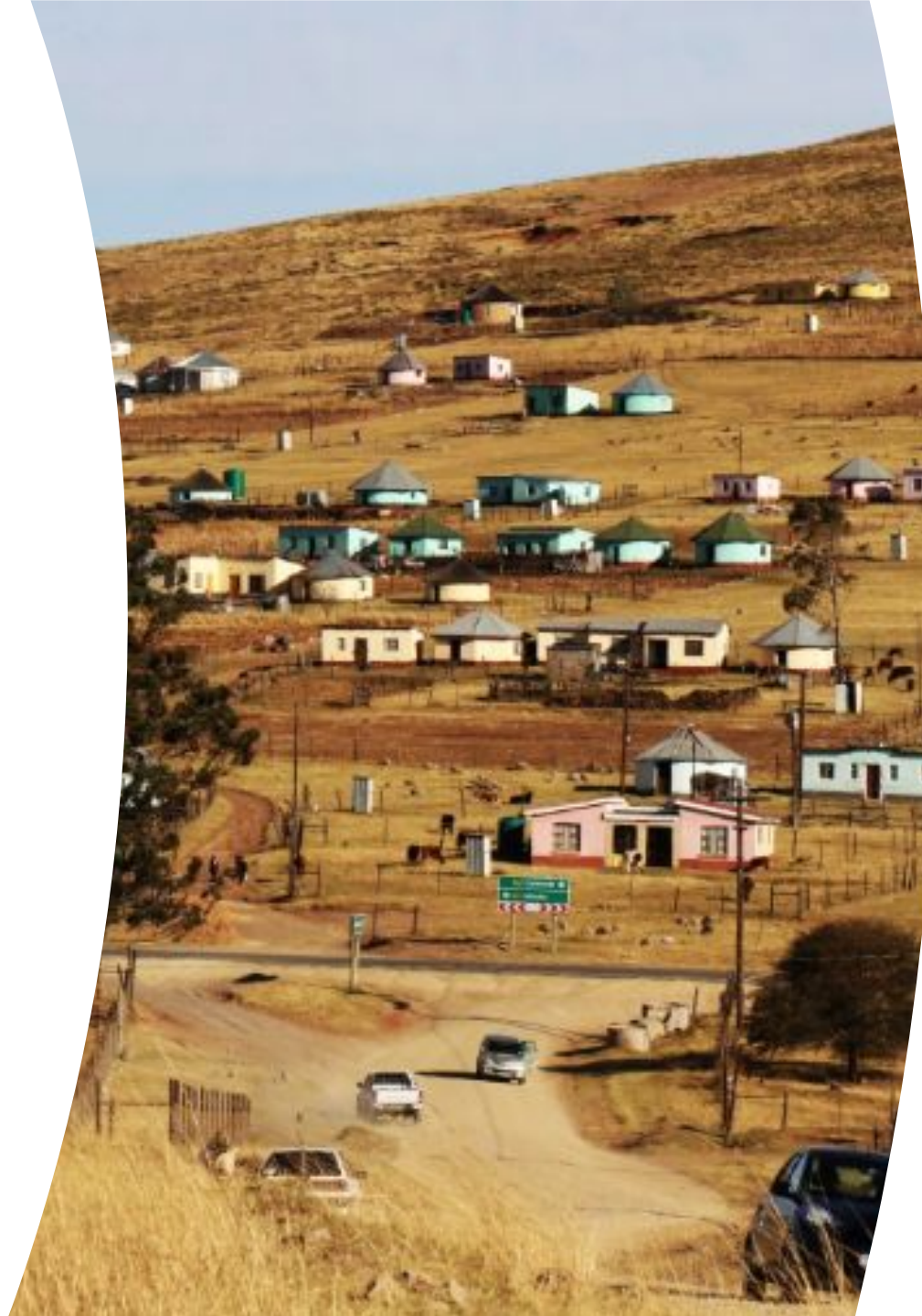
~1 billion people in
Africa still not using
mobile internet in 2025,
despite substantial
network coverage.

<https://datahub.itu.int/data/?Affordability=Price+regulation&Connectivity=Infrastructure+development+and+sharing&Governance=Enforcement+%26+Appeals&Markets=Emerging+technologies+regulation&Trust=Applications+and+Services&e=1&utm>

<https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-economy/africa>

<https://fibregeeks.co.za/how-fnos-and-isps-are-bringing-connectivity-to-rural-south-africa/>

1. Rural Broadband: Connecting the underserved communities



Who: • Schools • Clinics • Farms •
Deep-rural Villages

Why: Villages are far from fibre routes and dense mobile networks. Low population density weakens the business case for terrestrial expansion. Geographic isolation, high infrastructure costs and limited local skills.

How: Affordable satellite connectivity where terrestrial deployment is not feasible.

Case study: Mpumalanga Modikwa Clinic: In 2024, a remote clinic near Burgersfort was connected using LEO satellite broadband, demonstrating how satellite can support healthcare facilities where conventional connectivity is difficult

Regulatory Perspective: Satellite regulation and licensing to encourage investment and promote universal access.

2. Maritime Connectivity: From the Shoreline to the Open Ocean.



Who: Commercial vessels • Fisheries • Ports • Offshore operations • Research vessels

Why: Africa has an extensive coastline and major international shipping routes. Once vessels move beyond terrestrial coastal coverage, satellite becomes an important means of maintaining connectivity at sea.

How: GSO and NGSO satellite networks can provide broadband and operational connectivity for vessels, crews, ports, fisheries and offshore activities, including areas beyond the reach of terrestrial mobile networks.

Case study I&J Fishing: Satellite links connect fishing vessels at sea with teams on shore, enabling real-time catch reports, vessel data and operational information even when vessels are beyond terrestrial coverage.

Regulatory: ESIM clear authorisation rules, Cross-border management and protection against harmful interference.

3. Aviation: Connectivity across long routes and remote airspace

Who: Commercial airlines • Passengers • Flight crews • Aircraft operators • Remote airports



Why: Aircraft travel across vast distances, national borders and remote areas where terrestrial networks cannot provide continuous coverage. This is particularly relevant in Africa, where long flight routes may cross sparsely populated regions with limited terrestrial infrastructure.



How: GSO and NGSO satellite networks can provide in-flight broadband and operational connectivity, supporting passenger internet access, airline communications, aircraft operational data and connectivity beyond terrestrial coverage.



Case study: FlySafair publicly explored satellite-based in-flight Wi-Fi, including NGSO solutions, but concerned about regulatory approvals, cost and technology availability.



Regulatory: Authorisation for aeronautical ESIMs and cross-border operation, spectrum coordination, equipment conformity and protection from harmful interference. Commercial broadband applications must also coexist safely with safety-of-life aeronautical communications.

4. Disaster Recovery: Deployable backup

Who: Emergency services • Disaster management teams • Government • Humanitarian organisations • Affected communities

Why: Floods, wildfires and other disasters can damage mobile base stations, fibre links and power infrastructure, disrupting communications at the time they are needed most.

How: GSO and NGSO satellite networks can provide rapidly deployable and independent connectivity that supports emergency communications, broadband, restoration of mobile backhaul and coordination of rescue and humanitarian operations.

Case Study: Mozambique case study, 2025: severe weather damaged telecom infrastructure, leaving hundreds of base stations offline. Satellite phones and connectivity helped emergency teams stay connected and coordinate relief efforts.

Regulatory: Establish expedited emergency authorisation procedures for satellite terminals and temporary spectrum use.



5. Satellite IoT / M2M: Connecting Things Beyond Terrestrial Coverage



Who: Agriculture • Mining • Environmental monitoring



Why: Many farms, mines, pipelines and other assets are in remote areas beyond reliable terrestrial network coverage.



How: Satellite IoT connects sensors and devices over wide areas, enabling tracking, monitoring and collection of data from remote locations.

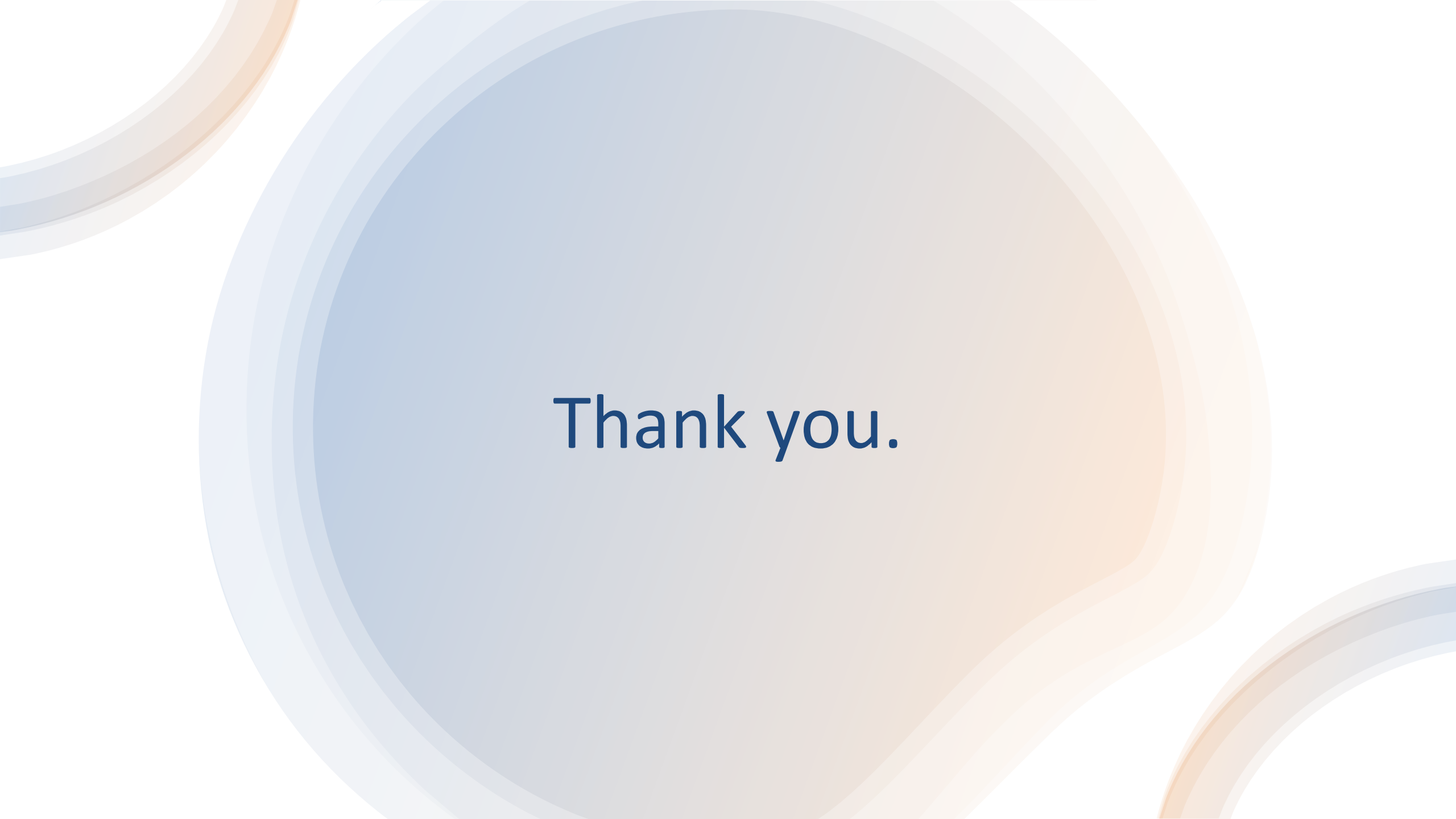


(South African smart-farming: Omega Farms uses a satellite IoT solution to connect systems for animal tracking, environmental monitoring, irrigation and harvest monitoring where terrestrial connectivity limited.)



Regulatory: Enable simple and proportionate authorisation for large numbers of IoT terminals and equipment conformity.





Thank you.